

RESPONSE TO RESTRICTION REQUIREMENT  
U.S. Appln. No. 10/541,019 (Q88424)

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1. (Currently Amended) A pharmaceutical preparation exhibiting excellent gastrointestinal absorbability comprising a compound recognized by a proton-coupled transporter and a pH-sensitive polymer,

wherein the pH-sensitive polymer is present~~being used~~ in an amount sufficient to impart to the gastrointestinal tract a pH at which the proton-coupled transporter optimally functions for cellular uptake of the compound.

Claim 2. (Currently Amended) A~~The~~ pharmaceutical preparation according to Claim 1, wherein the proton-coupled transporter is an influx transporter expressed in a small-intestinal epithelial cell.

Claim 3. (Currently Amended) A~~The~~ pharmaceutical preparation according to Claim 2, wherein the proton-coupled transporter is ~~one~~ a member selected from the group consisting of a peptide transporter, monocarboxylic acid transporter, and D-cycloserine-transporting amino acid transporter.

Claim 4. (Currently Amended) A~~The~~ pharmaceutical preparation according to Claim 3, wherein the proton-coupled transporter is a peptide transporter.

Claim 5. (Currently Amended) A~~The~~ pharmaceutical preparation according to Claim 4, wherein the compound recognized by the peptide transporter is at least one ~~species~~ member selected from the group consisting of a ~~peptides~~,  $\beta$ -lactam

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antibiotics, angiotensin-converting enzyme inhibitors, antiviral agents, antitumor agents, and  $\omega$ -amino carboxylic acids.

Claim 6. (Currently Amended) AThe pharmaceutical preparation according to Claim 3, wherein the proton-coupled transporter is a monocarboxylic acid transporter.

Claim 7. (Currently Amended) AThe pharmaceutical preparation according to Claim 6, wherein the compound recognized by the monocarboxylic acid transporter is at least one ~~species~~ member selected from the group consisting of lactic acid, pyruvic acid, acetic acid, propionic acid, butyric acid, glycolic acid, nicotinic acid, salicylic acid, benzoic acid, p-aminobenzoic acid, and foscarnet.

Claim 8. (Currently Amended) AThe pharmaceutical preparation according to Claim 3, wherein the proton-coupled transporter is an amino acid transporter transporting D-cycloserine.

Claim 9. (Currently Amended) AThe pharmaceutical preparation according to Claim 8, wherein the compound recognized by the amino acid transporter transporting D-cycloserine is at least one ~~species~~ member selected from the group consisting of L-alanine, (-)-alanine, L-proline, and glycine.

Claim 10. (Currently Amended) ~~A~~ The pharmaceutical preparation according to Claim 1, wherein the pH at which the proton-coupled transporter optimally functions for cellular uptake of the compound is determined by evaluating under various pH conditions the extent of cellular uptake of the compound using cells in which the proton-coupled transporter is expressed.

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Claim 11. (Currently Amended) ~~A~~The pharmaceutical preparation according to Claim 1, wherein the pH at which the proton-coupled transporter optimally functions for cellular uptake of the compound is determined by measuring the extent of the compound migrated within the gastrointestinal tract using the in situ closed loop method conducted in the intestinal tract.

Claim 12. (Currently Amended) ~~A~~—The pharmaceutical preparation according to Claim 1, wherein the pH-sensitive polymer is at least one ~~species-member~~ selected from the group consisting of dried methacrylic acid copolymer, methacrylic acid copolymer LD, methacrylic acid copolymer L, methacrylic acid copolymer S, polyacrylic acid, maleic acid/n-alkyl vinyl ether copolymer, hydroxypropylmethylcellulose acetate succinate, and hydroxypropylmethylcellulose phthalate.

Claim 13. (Currently Amended) ~~A~~—The pharmaceutical preparation according to Claim 1, wherein the pH-sensitive polymer is at least one ~~species-member~~ selected from the group consisting of Eudragit L100-55, Eudragit 30D-55, Eudragit L100, Eudragit S100, Eudragit P-4135F, polyacrylic acid, maleic acid/n-alkyl vinyl ether copolymer, hydroxypropylmethylcellulose acetate succinate, and hydroxypropylmethylcellulose phthalate.

Claim 14. (Currently Amended) ~~A~~—The pharmaceutical preparation according to Claim 1, wherein said preparation is suitable that is used for oral administration.

Claims 15-16. (Cancelled).

Claim 17. (Currently Amended) A pharmaceutical preparation for enhancing gastrointestinal absorbability of a compound recognized by a proton-coupled transporter,

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the pharmaceutical preparation comprising ~~the~~a compound recognized by a proton-coupled transporter and a pH-sensitive polymer in an amount sufficient for the gastrointestinal tract to acquire a pH at which the proton-coupled transporter optimally transports the compound into a cell.

Claim 18. (Currently Amended) A method for enhancing gastrointestinal absorbability of a compound recognized by a proton-coupled transporter,

~~the method comprising conditioning the gastrointestinal tract to a pH at which the proton-coupled transporter optimally transports the compound into a cell~~ administering the preparation of Claim 1 to a subject in need thereof.

Claim 19. (Currently Amended) A method for using a pH-sensitive polymer, to enhance gastrointestinal absorbability of a compound recognized by a proton-coupled transporter, ~~in an amount sufficient to impart to the gastrointestinal tract a pH at which the proton-coupled transporter optimally transports the compound into a cell~~ the method comprising administering the preparation of Claim 17 to a subject in need thereof.

Claims 20-21. (Cancelled).